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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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26304	7590	12/18/2006	EXAMINER	
KATTEN MUCHIN ROSENMAN LLP			YOUNG, JANELLE N	
575 MADISON AVENUE			ART UNIT	
NEW YORK, NY 10022-2585			PAPER NUMBER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/796,232

Applicant(s)

KOBAYASHI, YUTAKA

Examiner

Janelle N. Young

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claim 5 is objected to because of the following informalities: The limitation “**lost**” in “receiving sides will not be lost” is not found in the specification. The specification discloses receiving sides will not become desynchronized, examiner will interpret lost meaning desynchronized or not synchronized.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 7-11, 13-14, and 19-23 are rejected under 35 U.S.C. 102(b) as being anticipating by Ariyoshi et al. (US Patent 2002/0021682).

As for claim 1, Ariyoshi et al. teaches a transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR (Page 1, Para 0005; Page 2, Para 0015 & 0019; and Page 5, Para 0049 of Ariyoshi et al.), comprising the steps of:  
determining whether an interval is an interval in which data is being  
transmitted (Page 3, Para 0032 and Page 6, Para 0056 of Ariyoshi et al.);

comparing the error rate of receive data after decoding and the target error rate and controlling the target SIR in an interval in which data is being transmitted (Page 1, Para 0011 and Page 2, Para 0015, 0017, & 0019 of Ariyoshi et al.);

measuring the error rate of a demodulated receive pilot in an interval in which data is not being transmitted (Page 1, Para 0009-0010 and Page 3, Para 0029 & 0031 of Ariyoshi et al.); and

controlling target SIR upon comparing the measured error rate of the pilot and target error rate of the pilot (Page 5, Para 0048 and Page 6, Para 0059 of Ariyoshi et al.).

As for claim 2, Ariyoshi et al. teaches a transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR, wherein the error rate of a synchronous word contained in a pilot is adopted as the error rate of the pilot (Page 3, Para 0028-0030 & 0035 of Ariyoshi et al.).

As for claim 7, Ariyoshi et al. teaches a transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR, further comprising a step of storing target SIR in control before a changeover is made from the control in the interval in which data is being transmitted to the control in the interval in which data is not being

Art Unit: 2618

transmitted (Page 1, Para 0002-0007 & 0011; Page 3, Para 0020; and Page 5, Para 0050 in respect to Page 4, Para 0045 and Page 5, Para 0047 of Ariyoshi et al.).

As for claim 8, Ariyoshi et al. teaches a transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR, further comprising a step of storing target SIR prevailing when the measured error rate of the pilot has attained the target error rate, after the changeover is made to the control in the interval in which data is not being transmitted (Page 1, Para 0011; Page 3, Para 0019-0020; and Page 5, Para 0049-0051 in respect to Page 5, Para 0047 of Ariyoshi et al.).

As for claim 9, Ariyoshi et al. teaches a transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR, further comprising a step of storing the difference between target SIR prevailing when the measured error rate of the pilot has attained the target error rate and the stored target SIR, after the changeover is made to the control in the interval in which data is not being transmitted (Page 1, Para 0011; Page 3, Para 0019-0020; and Page 5, Para 0049-0051 in respect to Page 5, Para 0048 of Ariyoshi et al.).

As for claim 10, Ariyoshi et al. teaches a transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a

manner that measured SIR will agree with the target SIR, further comprising a step of setting the stored SIR as target SIR when a changeover is made from the control in the interval in which data is not being transmitted to the control in the interval in which data is being transmitted (Page 2, Para 0016-0017; Page 3, Para 0020; Page 4, Para 0046; and Page 5, Para 0047-0050 in respect to Page 5, Para 0048 of Ariyoshi et al.).

Regarding claim 13, see explanation as set forth regarding claim 1 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Regarding claim 14, see explanation as set forth regarding claim 2 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Regarding claim 19, see explanation as set forth regarding claim 7 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Regarding claim 20, see explanation as set forth regarding claim 8 (method claim) because the claimed transmission power control apparatus for comparing error

rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Regarding claim 21, see explanation as set forth regarding claim 9 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Regarding claim 22, see explanation as set forth regarding claim 10 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3-4 & 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ariyoshi et al. (US Patent 2002/0021682) as applied to claim 1 above, and further in view of Kim et al. (US Pub 2003/0119452).

As for claims 3-4, Ariyoshi et al. teaches a transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR (Page 1, Para 0005; Page 2, Para 0015 & 0019; and Page 5, Para 0049 of Ariyoshi et al.).

What Ariyoshi et al. does not explicitly teach is Transport Format Combination Indicator (TFCI).

However Kim et al. teaches a step for determining whether an interval is an interval in which data is being transmitted based upon results obtained by decoding demodulated TFCI information and/or based upon TFCI information that has been demodulated by a modem (Page 20, Para 0197; Page 22, Para 0209; and Page 27, Para 0248 of Kim et al.).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate the control information such as uplink TPC (Transmission Power Control) command, TFCI (Transport Format Combination Indicator) symbol, and pilot symbol techniques, as taught by Kim et al., in the communication and power control method of Ariyoshi et al., because Ariyoshi et al. already teaches a channel estimation pilot signal, a TFCI (transport format combination indicator), FBI (feedback information) and a transmission power control command (TPC) (Page 3, Para 0035 of Ariyoshi et al.).

The motivation of this combination would be the effect of the frame structure of a dedicated physical data channel and a dedicated physical control channel in the uplink



and the frame's slot, as taught by Ariyoshi et al. in Page 3, Para 0035. The downlink DPDCH converts control signals such as the TFCI provided from the upper layer in accordance with the frame's slot. This helps to perform a series of transmission processes such as channel coding and spreading, and provides its output (Page 15, Para 0167-0171; Page 20, Para 0198; Page 22, Para 0209; and Page 27, Para 0250 of Kim et al.).

Regarding claim 15, see explanation as set forth regarding claim 3 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Regarding claim 16, see explanation as set forth regarding claim 4 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

4. Claims 5, 11, 17, & 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ariyoshi et al. (US Patent 2002/0021682) as applied to claim 1 above, and further in view of Jitsukawa et al. (US Pub 2003/0012267).

As for claim 5, Ariyoshi et al. teaches a transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling

target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR (Page 1, Para 0005; Page 2, Para 0015 & 0019; and Page 5, Para 0049 of Ariyoshi et al.).

What Ariyoshi et al. does not explicitly teach is upper and lower limits of the target error rate of the pilot.

However, Jitsukawa et al. teaches a step of setting the target error rate of the pilot is used in synchronous detection on the receiving side; which reads on claimed a manner that synchronism between the transmitting and receiving sides will not be lost, when the target SIR has been lowered upon comparing the measured error rate of the pilot and the target error rate of the pilot (Fig. 1, 7, & 9; Page 1, Para 0005 and Page 2, Para 0010-0011 in correspondence to Page 1, Para 0001-0003 & 0007 and Page 2, Para 0016-0017 of Jitsukawa et al.).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate a pilot is used in synchronous detection on the receiving side, as taught by Jitsukawa et al., in the communication and power control method of Ariyoshi et al., because Ariyoshi et al. already teaches obtaining synchronization timing (Page 2, Para 0029 of Ariyoshi et al.).

The motivation of this combination would be the effect of the received signal that is first despread by the despreading code of the dedicated physical control channel to obtain a synchronization timing, as taught by Ariyoshi et al.

As for claim 11, Ariyoshi et al. teaches a transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling

target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR, wherein when the change is made from the control in the interval in which data is not being transmitted to the control in the interval in which data is being transmitted, a value obtained by adding the absolute value of the difference between the two stored target SIRs or the absolute value of the stored difference to the target SIR that prevailed prior to the changeover of control is set as the target SIR (Page 6, Para 0061-0067 in respect to Abstract; Page 2, Para 0010 and Page 3, Para 0019 of Jitsukawa et al.).

Regarding claim 17, see explanation as set forth regarding claim 5 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Regarding claim 23, see explanation as set forth regarding claim 11 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

5. Claims 6, 12, 18, & 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ariyoshi et al. (US Patent 2002/0021682) as applied to claim 1 above, and further in view of Okumura (US Pub 2003/0003942).

As for claim 6, Ariyoshi et al. teaches a transmission power control method for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR (Page 1, Para 0005; Page 2, Para 0015 & 0019; and Page 5, Para 0049 of Ariyoshi et al.).

What Ariyoshi et al. does not explicitly teach is upper and lower limits of the target error rate of the pilot.

However, Okumura teaches a step of providing upper and lower limits of the target error rate of the pilot and controlling the target SIR in such a manner that the measured error rate of the pilot will fall within a range defined by said upper and lower limits (Page 1, Para 0014; Page 2, Para 0018; Page 4, Para 0062-0064; Page 5, Para 0065 & 0070; Page 7, Para 0088 & 0092; and Page 8, Para 0115-0116 of Okumura).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate a prevention that does not allow the data quality from becoming unnecessarily high and/or low and to achieve reasonable transmit power control. the target signal quality is set to fall between the predetermined limits, as taught by Okumura, in the communication and power control method of Ariyoshi et al., because Ariyoshi et al. already teaches making adjustments to the transmission power to hold the SIR at a specific target (Page 1, Para 0003 of Ariyoshi et al.).

The motivation of this combination would be the effect of the controlling the transmission power of the mobile station, as taught by Ariyoshi et al. The determined a target value for power control would be based on the determined error rate. Then, the

Art Unit: 2618

target signal quality is updated so that data quality received at the receiving station satisfies prescribed target data quality (Abstract; Page 1, Para 0010 & 0014-0015; Page 2, 0016-0021; and Page 9, Para 0118 of Okumura).

As for claim 12, Ariyoshi et al. teaches a control method for controlling a transmitter so as to make a measured reception quality approach a target quality, wherein if a data signal is not contained in a prescribed receive interval and a pilot signal is contained in said interval based upon format information of a received receive signal, the target quality is controlled based upon the pilot signal, and if a data signal is contained in the prescribed receive interval, the target quality is controlled based upon the data signal (Page 1, Para 0004-0005; Page 4, Para 0058 & 0063; and Page 5, Para 0065-0067 of Okumura).

Regarding claim 18, see explanation as set forth regarding claim 6 (method claim) because the claimed transmission power control apparatus for comparing error rate of receive data and target error rate on a receiving side, controlling target SIR and causing a transmitting side to control transmission power in such a manner that measured SIR will agree with the target SIR would perform the method steps.

Regarding claim 24, see explanation as set forth regarding claim 12 (method claim) because the claimed receiving apparatus for controlling a transmitter to make a measured reception quality approach a target quality would perform the method steps.

**Conclusion**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle N. Young whose telephone number is (571) 272-2836. The examiner can normally be reached on Monday through Friday: 8:30 am through 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JNY  
November 27, 2006

*Quochien B. Vuong* 12/10/06

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PRIMARY EXAMINER